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lactate dehydrogenase (LDH), wherein said isolated protein is found intracellularly in Eimeria.

**REMARKS**

Claims 1-3, 11, and 13-25 are pending in the present application, because claims 4-10 and 12 were canceled in the Preliminary Amendment filed September 14, 1999. It appears that the Examiner has examined claims 1-3, 11, 13, 16-20 and 23-24. Claims 14-15, 21-22 and 25 appear to be withdrawn from consideration as being drawn to a non-elected invention. Claims 1 and 17 are independent claims.

Applicants have amended claim to add language that was inherently present in the claimed subject matter. The specification on page 6, paragraph two provides support for the amendment to claim 1. Applicants believe that the amendment does not further limit the scope of claim 1 because the claimed subject matter was always found intracellularly. Applicants have not raised any issue of new matter.

Applicants respectfully request the Examiner to consider the above amendment and following remarks and enter them into the record. Applicants assert that the amendment only clarifies and does not cause the Examiner to further search.

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Election/Restriction

As discussed above, the Examiner has examined claims 1-3, 11, 13, 16-20 and 23-24. Claims 14-15, 21-22 and 25 have been withdrawn from consideration as being drawn to a non-elected invention. Applicants acknowledge that the Examiner has made the requirement final.

Applicants respectfully request the Examiner to fill in items 4 and 4a of any subsequent Office Action Summary such that items 4 and 4a reflect the status of pending and withdrawn claims.

Issue Under 35 U.S.C. §102

Claims 1-3, 11, 13, 16-20 and 23-24 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by Binger '015 (USP 5,661,015). The instant application is a Divisional of U.S. Application 08/676,882, filed July 3, 1996, now USP 6,100,241. Thus, the instant application has a U.S. filing priority date of July 3, 1996. Binger '015 was published August 26, 1997, which is clearly later than the filing date of the instant application's parent filing date. Therefore, the outstanding rejection is improperly listed as being under 35 U.S.C. §102(b).

The alleged rejection should be under 35 U.S.C. §102(e) as a result of the U.S. filing date of Binger '015, which is December 20, 1991. Applicants respectfully request the Examiner to

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address this issue in a subsequent communication.

Applicants assert that patentable distinction exists between the cited prior art and the present invention.

Distinction Between the Present Invention and Binger '015

Binger '015 discloses DNA sequences coding for Eimeria surface antigens, recombinant vectors containing such DNA sequences, transformed microorganisms containing such vectors, and method for producing the antigens using the transformed microorganisms. The Examiner maintains that Binger '015 discloses that a 37 kD protein of Eimeria is synthesized intracellularly. Applicants traverse this interpretation of the reference.

In section 6.1.9 Binger '015 recites, "[a]ntibody 8A2 reacted with a 37 kd protein present on the surface of sporozoites . . . , in all stages of the developing schizont . . . and the surface of released merozoites . . . . Unlike the protein recognized by antibodies 7D4 and 14B1, the 37 kd protein was synthesized throughout the intracellular development of the parasite." This statement states that the 37 kd protein is on the surface and was synthesized throughout the intracellular development of the parasite. The statement does not state that the 37 kd protein "is found intracellularly in Eimeria" as claimed in claim 1 of the present application. The phrase "intracellular development of the parasite" means the development

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of the whole parasite and not the location of the 37 kd protein, whereas the isolated protein of the present invention is found inside Eimeria and not on the surface of Eimeria.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Binger '015 fails to disclose each and every element as set forth in the instant claims. Therefore, Applicants respectfully request withdrawal of the 35 U.S.C. §102(e) rejection.

#### Additional Distinctions

In addition to the argument recited above, Applicants would like to point out that the protein of the present invention and the 37 kd protein of Binger '015 are unrelated based on their amino acid sequences.

In Binger '015, the 37 kd surface protein is specifically recognized by a monoclonal antibody 8A2 (ATCC HB9710). The protein was identified by reaction of 8A2 with phage  $\lambda$  plaque of an expression library of E. tenella sporulating oocyst cDNA. See Binger '015 6.2.1 and 6.3. Applicants believe from the sequences

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depicted in the figures of Binger '015 that the sequence as depicted in fig. 32 is the most appropriate to use as a comparison to the LDH protein of the instant invention.

Binger '015 fig. 32 sequence is available via accession number AAW33626 in the AAGeneSeq database, and the LDH protein of seq. id. 2 of the present invention is listed in the parent application, now U. S. Patent 6,100,241. When a skilled artisan compares these two sequences, only a 25% homology is found. Therefore, the two proteins are totally unrelated. Therefore, Applicants again respectfully request withdrawal of the 35 U.S.C. §102(e) rejection.

### Conclusion

All the stated grounds of the rejections have been properly traversed, accommodated or rendered moot. Applicants respectfully submit that the present application is in condition for allowance.

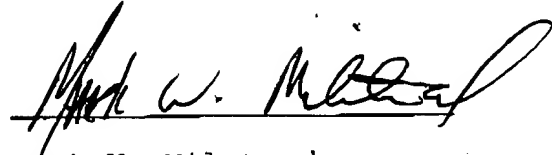
Attached hereto is a marked-up version to show changes to the application by this amendment.

If the Examiner believes for any reason that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (302) 934-4395, in Millsboro, Delaware.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies, to charge payment or credit any

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overpayment to Deposit Account No. 02-2334 for any additional  
fees required under 37 C.F.R. \$1.16 or under 37 C.F.R. \$1.17;  
particularly extension of time fees.

Respectfully submitted,



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Enclosure:      Version with Markings to Show Changes Made

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**Version with Markings to Show Changes Made**

In the Claims

The claims have been amended as follows:

1. (Three Times Amended) An isolated protein comprising one or more immunoreactive and/or antigenic determinants of Eimeria lactate dehydrogenase (LDH), wherein said isolated protein is found intracellularly in Eimeria.